

TITLE OF GROUP OF CLASSES
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PRINCIPAL CIVIL ENGINEER

	Class Code:
(CONSTRUCTION AND MAINTENANCE)	02968402
(DESIGN)	02968403
(MATERIALS)	02968404
(TRANSPORTATION PLANNING)	02968405
(NATURAL RESOURCES)	02968406
(STRUCTURAL)	02968407
(MECHANICAL)	02968408
(ELECTRICAL)	02968409

Pay Grade: 33A

EO: B

CLASS DEFINITION:

GENERAL STATEMENT OF DUTIES: To perform difficult technical or supervisory work in professional civil engineering in the area of specialization indicated by the title in the class of position; and to do related work as required.

SUPERVISION RECEIVED: Works under the general supervision of a superior from whom are received general directions which afford the opportunity for the use of independent judgement and making of technical decisions of moderate difficulty; work is reviewed through the examination of reports, through conferences and by inspections.

SUPERVISION EXERCISED: Plans, assigns, supervises and reviews the work of professional, sub-professional, labor and clerical employees.

ILLUSTRATIVE EXAMPLES OF WORK PERFORMED:

In the area of specialization indicated by the title in the class of position:

To supervise the contract construction of roads or bridges, related highway projects in reviewing plans, specifications and designs submitted by the contractor, architect or engineer and make recommendations thereon; in the field: to be responsible for interpreting provisions of contracts, plans, specifications and designs; to assure that construction work schedules are maintained and to supervise the continuous inspection of workmanship, materials and methods; to be responsible for the technical supervision of a staff engaged in the operation and maintenance of state bridges; or, to assist an engineer of higher rank in the administrative and technical supervision of all activities of the state road construction or maintenance program; to assist in inspecting all state-maintained highways and to estimate the amount of maintenance necessary on each road; to assist in planning, organizing, coordinating and supervising the work program of the construction or maintenance section, and to assist in enforcing contract plans and specifications of contract or maintenance.

To lay out, oversee and check the work of subordinate engineers performing moderately complex civil engineering work in the design of all types of bridges, grade crossing structures and approaches; and to design difficult and important major structures of advanced design; or, to layout, oversee and check the work of subordinate engineers performing moderately complex civil engineering work in the design of all types of roads and road structures; and to design and make improvements to major roads and related structures of advanced design; or, to perform professional engineering work involved in traffic control program; to plan, supervise and review the work of a crew engaged in traffic sign painting and installation, pavement striping and traffic signal light installation and maintenance; and to prepare reports relating to the failure of traffic devices.

To plan, supervise and review the testing, inspection and approval or rejection of all materials used in highway construction and maintenance; to prepare materials specifications; and to originate and supervise

materials research projects; to initiate and supervise the development of new methods and techniques in soils and foundations engineering and their application to highway work; and to perform the field and laboratory work related to soil sampling and analysis.

For proposed new or existing highways, to prepare, preliminary geometric designs, charts and graphs and preliminary reports on speed, no passing zones, parking, traffic signs, accidents, one-way streets, merging and through routes and related matters; and to conduct traffic movement studies, road improvement studies, road improvement priorities and related matters.

To be responsible for the supervision of the engineering activities relating to the development and protection of the state's natural resources; to supervise contract construction at the state's parks, beaches, and other conservation areas involving such construction as dams, sewers, small buildings, secondary roads, breakwaters, piers, docks, fish ladders, historical restorations and erosion prevention; to be responsible for the preparation of cost estimates, specifications and plans; to coordinate and review plans and specifications prepared by subordinates and/or contractors; and to be responsible for enforcing contract plans and specifications for natural resource projects.

To review architectural and engineering plans related to the electrical, structural or mechanical field of engineering to insure compliance and conformance to the building code.

To do related work as required.

REQUIRED QUALIFICATIONS FOR APPOINTMENT:

KNOWLEDGES, SKILLS AND CAPACITIES: A thorough knowledge of the principles and practices of the area of specialization indicated in the title of the class of position and the ability to apply such principles and practices; considerable skill in the use of all standard surveying and other engineering instruments and in making all algebraic and trigonometric computations applied to highway, bridge or airport design or construction operations, or building construction projects; the ability to read and interpret all types of civil engineering plans and specifications and obtain compliance by the contractor in all details, as well as to approve or reject all proposed minor changes therein; the ability to plan, assign, supervise and review the work of a group of professional, sub-professional, labor and clerical employees; the ability to establish and maintain effective working relationships with contractors, supervisors, and subordinates; and related capacities and abilities.

EDUCATION AND EXPERIENCE:

Education: Such as may have been gained through: graduation from a college of recognized standing with specialization in Civil Engineering; and

Experience: Such as may have been gained through: employment at the level of Senior Civil Engineer in a public agency or in private industry in the area of specialization indicated in the title of this class of position. **Or,** any combination of education and experience that shall be substantially equivalent to the above education and experience.

SPECIAL REQUIREMENT: At the time of appointment must possess, at least, an Engineer-in-Training certificate of registration issued by the Rhode Island State Board of Registration for Professional Engineers and must maintain such registration as a condition of employment.

Revised: May 15, 1994

Editorial Review: 3/15/2003